

IN THE CLAIMS:

1. (Currently amended) A process for the preparation of galactose starting from milk or milk serum not subjected to any preliminary removal of the protein portion of milk and purification treatment and not containing any bactericides or bacteriostats, comprising the following steps:

i) ~~a inoculum of~~ milk or milk serum suspension is inoculated with ~~non-~~modified wild type micro-organisms able to hydrolyse lactose ~~thus obtaining into~~ galactose and glucose; and able to consume the so-obtained glucose;

ii) ~~fermentation of the solution~~ suspension coming from step i) ~~is fermented~~ maintaining a constant pH value at $5 < \text{pH} < 7.5$ for a period of time ranging between 16 and 24 hours, by adding a base, ~~strong or weak~~, of inorganic origin, the pH value is then left to spontaneously decrease stopping the base addition for a period of time ranging between 5 and 60 hours thus obtaining a suspension enriched in galactose;

iii) ~~recovery of~~ recovering a solution of the desired galactose ~~solution and removing the biomass~~ from the fermentation ~~product~~ suspension coming from step ii).

2. (Original) The process according to claim 1, in which said milk or milk serum has a concentration in lactose ranging between 2.5% by weight in respect to the total weight of the milk or milk serum and the saturation concentration.

3. (Original) The process according to claim 2, in which said milk or milk serum has a concentration in lactose ranging between 3 and 15% by weight in respect to the total weight of the milk or milk serum.

4. (Cancelled)

5. (Currently amended) The process according to claim 1, in which said ~~non-modified wild-type~~ microorganisms of step i) are selected from among bacteria belonging to the family of *Lactobacillaceae*.

6. (Original) The process according to claim 5, in which said bacteria belonging to the family of *Lactobacillaceae* are bacteria belonging to bacterial stocks selected from the group consisting of *Streptococcus*, *Lactobacillus* and mixtures thereof.

7. (Currently amended) The process according to claim 6, in which said bacteria are selected from the group consisting of *Streptococcus Thermophilus*, *Lactobacillus Bbulgaricus*, *Lactobacillus Ccasei* species and mixtures thereof.

8. (Cancelled)

9. (Cancelled)

10. (Original) The process according to claim 1, in which said fermentation in step ii) is carried out at a temperature ranging between 25 and 50°C.

11. (Original) The process according to claim 10, in which said fermentation in step ii) is carried out at a temperature ranging between 37 and 45°C.

12. (Currently amended) The process according to claim 1, in which said milk or milk serum, before being subjected to the inoculum in step i), if necessary, is brought to a pH ≤ 7.5 .

13. (Original) The process according to claim 12, in which said milk or milk serum, before being subjected to inoculum in step i), is brought to a pH ranging between 5.0 and 7.5.

14. (Currently amended) The process according to claim 12, in which said pH < 7.5 value is obtained by adding a base, ~~strong or weak~~, of inorganic origin.

15. (Currently amended) The process according to claim 1, in which said base of inorganic origin added in step ii) is

a) Aa strong base selected from the group consisting of sodium hydroxide, potassium hydroxide, calcium hydroxide, magnesium hydroxide, and calcium carbonate ~~and or~~

b) a weak base selected from the group consisting of ammonia.

16. (Currently amended) The process according to claim 1, in which the recovery of the galactose solution from the product of fermentation in step ii) is carried out removing the biomass by centrifugation and/or ultrafiltration, thus obtaining a solution that is possibly nanofiltrated and/or concentrated at warming under vacuum, to remove water and obtain a galactose solution of the desired concentration.

17. (Original) The process according to claim 16, in which after removal of the biomass, the resulting solution is deionised by electrodialysis and subsequent passage on an ion exchange column, and microfiltrated.

18. (Original) The process according to claim 1, in which said milk or milk serum, before being subjected to inoculum in step i), and/or at the end of fermentation in step ii), is subjected to pasteurisation.

19. (Currently amended) Method for the disposal of milk serum derived from dairy industry containing at least 2.5% by weight of lactose in respect to the total weight not subjected to removal of the protein portion of milk ~~any preliminary and purification treatment~~ and not containing bactericides or bacteriostats, comprising inoculating serum with ~~non-modified~~ wild-type micro-organisms able to hydrolyse lactose thus obtaining galactose and glucose and to consume the so obtained glucose, followed by fermentation maintaining a constant pH value at $\text{pH} \leq 7.5$ for a period of time ranging between 16 and 24 hours, by adding a base, ~~strong or weak~~, of inorganic origin, and finally recovery of a galactose solution from the fermentation product.

20. (Currently amended) The process according to claim 14, in which said bases ~~strong or weak~~, of inorganic origin is ~~selected from the group consisting of sodium hydroxide, potassium hydroxide, calcium hydroxide, magnesium hydroxide, calcium carbonate and ammonia.~~

- a) Aa strong base selected from the group consisting of sodium hydroxide, potassium hydroxide, calcium hydroxide, magnesium hydroxide, and calcium carbonate, or
- b) a weak base selected from the group consisting of ammonia.